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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,510	08/16/2005	Antonio Lopez Munoz	MDR-0039	7871

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ARLINGTON, VA 22203

EXAMINER
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MCCLENDON, SANZA L

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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04/28/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/525,510	<b>Applicant(s)</b> LOPEZ MUNOZ, ANTONIO	
	<b>Examiner</b> Sanza L. McClendon	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Response to Amendment***

1. In response to the Amendment received on January 12, 2009, the examiner has carefully considered the amendments.

***Response to Arguments***

2. Applicant's arguments filed January 12, 2009 have been fully considered but they are not persuasive. Applicant appears to be relying on the amendment and is also arguing that the cited references in the rejection fail to render the instant claims obvious. Wherein applicant is arguing the primary reference Marshall et al does not teach the instant method and is drawn to a specific type of ink, one that does not comprise a sublimatible coloring agent. Instead Marshall et al teaches one ink that comprises a polar conductive component and one that does not contain a specific coloring agent. Additionally, applicant points out that Marshall et al states ink compositions and methods of producing said Ink compositions involves unpredictable and complex technologies. And for these reasons any modification to the compositions or the methods disclosed by Marshall et al may not lead to a viable ink composition. Regarding the secondary reference Condo et al, applicant states that said references does not remedy the deficiencies of Marshall et al because Condo et al does not disclose the critical method steps in claim 19 or the sequences of those steps.

3. These are not convincing since applicant has not provided any convincing evidence and/or arguments. The primary reference Marshall et al teaches an ink composition comprising the instantly claimed components except for the sublimatible coloring agent. However, Condo

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et al is being relied on for teaching sublimatable coloring agents are known in radiation curable inkjet ink compositions, as well as, in digital inks that are ink jetted. Therefore, without evidence to the contrary, the examiner deems that it would have been within the skill level of an ordinary artisan in the photocurable ink inkjet composition art to replace the pigments of Marshall et al with other well-known coloring agents, such as sublimatable coloring agents. Additionally, as stated in the previous office action the only difference between the method of Marshall et al and the instantly claimed method is the photoinitiator is added with the diluting and crosslinking monomer dispersion instead of as a third component alone. As stated in the previous office action the courts have upheld selection of any order of mixing ingredients is prima facie obvious. If applicant is trying to argue that mixing the photoinitiator in as a separate addition additive as defined in the claim is different/improved or even if the product produced and/or jetted is different/improved then the ink product produces and/or jetted as taught by Marshall et al, the examiner would need/like to see these results. Thus, the rejections still stand.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 19-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall et al (5,275,646) in view of Codos et al (6,467,898).

Marshall et al teaches a photocurable ink composition. Said ink comprises a colorant and a liquid phase consisting essentially of polymerizable monomers, an optional conductive compound and a photoinitiator and/or sensitizer. The composition is curable by exposure to radiation, such as ultraviolet light. The composition can comprise up to 70%, e.g. 20 to 60%, by weight of a mono-functional monomer, such as isobornyl acrylate among others found in column 3. In order to balance the properties Marshall et al sets forth the addition from up to 70%, preferably from 30 to 50% of di-functional monomers, such as hexandiol acrylates, tripropylene glycol di (meth) acrylates, and others as found in column 3. Additionally, Marshall et al sets forth the use of up to 10% by weight of tri-functional monomers, such as trimethylolpropane tri (meth) acrylate—see column 3. The photoinitiators and photosensitizers can be found in column 4 along with the colorants. Additionally, polymers and prepolymers can be added to increase viscosity and/or increase the crosslink density in the cured ink—see column 5. Marshall et al sets forth in such a way that one of ordinary skill in the art would be able to obtain viscosities as high as up to 50 cps at 25 °C can be obtained or as low as 5 to 6 cps at 25 °C can be obtained depending on the amount of/proportions of reactive monomers added to the composition in the overall teachings of the disclosure—see column 2, column 3, lines 45, column 5, lines 29-64, and column 6, lines 20-21. Therefore, it is deemed Marshall et al encompasses applicant's viscosity range of 10 to 30 cps. Per example 1, Marshall et al teaches preparing a mixture of reactive monomers and photoinitiators. Separately, preparing a mixture comprising a colorant and reactive monomers and prepolymer/polymers to prepare a pigment dispersion and milling the dispersion to a particle size of no greater than 1 micron and adding the 1<sup>st</sup> preparation with stirring to obtain a polymerizable ink composition curable by exposure to radiation. While example 1 teaches dissolving the photoinitiator in a polymerizable composition (monomers and oligomers) and then adding to a dispersion comprising said colorant and monomer system, it is deemed that this still renders applicant's claim 19 obvious (i.e., step 2 diluting with a mixture of mono- and multi-functional monomers and step 3 adding a photoinitiator system). The courts have upheld selection of any order of mixing ingredients is *prima facie* obvious—see *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930). Thus it is deemed that it would have been obvious to first disperse the colorant, dilute with reactive monomers to a specific viscosity and then add the photoinitiator. Regarding claim 26, it is

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deemed obvious in view of the reference since one of ordinary skill in that art would recognize this known polymerization technique is an obvious means of applying radiation to cure a photopolymerizable composition.

The primary difference between the reference and the instant invention is Marshall et al does not teach the use of sublimatable coloring agents in the ink jet ink composition. However, sublimation dyes types are known in UV polymerizable inkjet ink compositions used in digital printing methods, as seen in Condo et al.

Condos et al teaches methods using a UV polymerizable inkjet ink composition for printing on textiles via a digital printing process—see column 4, lines 51-52. Said method includes combining a dye component with a UV curable ink composition component. Said dye can be a dispersed dye, an acidic dye, basic dye, metallized dye, naphthol dye or a sublimation dye—see column 5, lines 51-55 and claim 21. Said UV curable ink composition can be any that is composed essentially of polymerizable monomers—column 10, lines 40-56 and column 14, lines 25-30.

Marshall et al and Condos et al are analogous are because they are from the same field of endeavor, that is the art of UV polymerizable inkjet ink compositions and methods of using the same. Therefore, it would have been obvious, at the time of the invention, to an artisan of ordinary skill in the art to use sublimation dyes, as suggested by Condos et al, in an inkjet ink compositions as taught by Marshall et al. The motivation would have been a reasonable expectation of success in printing onto media such as fabrics, as taught by Condo et al in the absence of evidence to the contrary or unexpected results. It is deemed that claims 19-30 are rendered obvious in view of the combination of references.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sanza L McClendon/  
Primary Examiner,  
Art Unit 1796

SMc